

## CLAIMS

1. An access method for an apparatus to gain access to a memory device, comprising,  
in the apparatus,  
5 transmitting designation information for designating an access area of the memory device; and  
transmitting together a processing command for the access area and verification information on the designation information, and  
10 in the memory device,  
receiving the designation information;  
further receiving the processing command and the verification information, and verifying the designation information using the verification information; and  
15 executing the processing command when verification succeeds.
2. An access method for an apparatus to gain access to a memory device, comprising:  
in the apparatus,  
20 sharing with the memory device enabled area information on an access enabled area of the memory device;  
referring to the enabled area information, and  
transmitting designation information for designating an access area of the memory device; and  
25 transmitting together a processing command for the access area and verification information on the designation information, and

in the memory device,  
receiving the designation information;  
further receiving the processing command and the  
verification information, and verifying the designation  
5 information using the verification information; and  
executing the processing command when verification  
succeeds.

3. An access method for an apparatus to gain access  
to a memory device, comprising:

10 in the apparatus,  
sharing a verification key with the memory device;  
transmitting designation information for  
designating an access area of the memory device; and  
transmitting together a processing command for the  
15 access area and verification data obtained by encrypting  
verification information on the designation information  
using the verification key, and

in the memory device,  
receiving the designation information;  
20 further receiving the processing command and the  
verification data, and verifying the designation  
information using the verification data and the  
verification key; and

executing the processing command when verification  
25 succeeds.

4. An access method for an apparatus to gain access  
to a memory device, comprising:

in the apparatus,

sharing with the memory device enabled area  
information on an access enabled area of the memory device;

further sharing with the memory device a  
5 verification key corresponding to the access enabled  
area;

referring to the enabled area information, and  
transmitting designation information for designating an  
access area of the memory device; and

10 transmitting together a processing command for the  
access area and verification data obtained by encrypting  
verification information on the designation information  
using the verification key, and

in the memory device,

15 receiving the designation information;

further receiving the processing command and the  
verification data;

verifying the designation information using the  
verification data and the verification key; and

20 executing the processing command when verification  
succeeds.

5. An access method for an apparatus to gain access  
to a memory device, comprising:

in the apparatus,

25 sharing with the memory device enabled area  
information on an access enabled area of the memory device  
using first protocol commands;

referring to the enabled area information, and transmitting designation information for designating an access area of the memory device using a second protocol command; and

5       transmitting together a processing command for the access area and verification information on the designation information using the second protocol command, and

in the memory device,

10       receiving the designation information;

further receiving the processing command and the verification information, and verifying the designation information using the verification information; and

15       executing the processing command when verification succeeds.

6. An access method for an apparatus to gain access to a memory device, comprising:

in the apparatus,

20       sharing a verification key with the memory device using first protocol commands;

transmitting designation information for designating an access area of the memory device using a second protocol command; and

25       transmitting together, using the second protocol command, a processing command for the access area and verification data obtained by encrypting verification

information on the designation information using the verification key, and

in the memory device,

receiving the designation information:

5 further receiving the processing command and the verification data, and verifying the designation information using the verification data and the verification key; and

executing the processing command when verification  
10 succeeds.

7. An access method for an apparatus to gain access to a memory device, wherein the memory device has:

a first area with tamper resistance restricting access from the apparatus;

15 a second area with non-tamper resistance restricting access from the apparatus;

a third area enabling access from the apparatus;  
and

a function of distinguishing between first protocol  
20 commands that are processing commands at least for the first area and second protocol commands that are processing commands at least for the third area, and the method comprises:

in the apparatus,

25 sharing with the memory device enabled area information on an access enabled area of the memory device using the first protocol commands;

referring to the enabled area information, and transmitting designation information for designating an access area of the second area using the second protocol command; and

5       transmitting together a processing command for the access area and verification information on the designation information using the second protocol command, and

in the memory device,

10       receiving the designation information;

further receiving the processing command and the verification information, and verifying the designation information using the verification information; and

15       executing the processing command when verification succeeds.

8.    An access method for an apparatus to gain access to a memory device, wherein the memory device has:

a first area with tamper resistance restricting access from the apparatus;

20       a second area with non-tamper resistance restricting access from the apparatus;

a third area enabling access from the apparatus; and

25       a function of distinguishing between first protocol commands that are processing commands at least for the first area and second protocol commands that are processing commands at least for the third area, and the

method comprises:

in the apparatus,

sharing a verification key with the memory device  
using the first protocol commands;

5       transmitting designation information for  
designating an access area of the second area using the  
second protocol command; and

transmitting together, using the second protocol  
command, a processing command for the access area and  
10       verification data obtained by encrypting verification  
information on the designation information using the  
verification key, and

in the memory device,

receiving the designation information;

15       further receiving the processing command and the  
verification data, and verifying the designation  
information using the verification data and the  
verification key; and

executing the processing command when verification  
20       succeeds.

9.     A memory device read and written by an apparatus,  
comprising:

a processing command receiver that receives  
designation information for designating an area to access,  
25       while receiving together verification information based  
on the designation information and a command for read  
or write;

a designation information verifier that performs verification processing on the designation information using the verification information;

a storage area that stores data;

5 a storage area access section that performs read or write from/in a designated area of the storage area corresponding to the command for processing, when the verification processing succeeds;

a data transmitter that transmits data read by the  
10 storage area access section to the apparatus; and

a data receiver that receives data to write from the apparatus.

10. The memory device according to claim 9, wherein the designation information verifier performs the  
15 verification processing using the verification information and a verification key.

11. The memory device according to claim 10, further comprising:

a verification key sharing section that shares the  
20 verification key with the apparatus.

12. The memory device according to claim 9, further comprising:

an enabled area information sharing section that shares enabled area information indicative of an access  
25 enabled area of the memory device with the apparatus.

13. An information apparatus that reads and writes a memory device, comprising:



an designation information determiner which determines an area to read or write, and further determines designation information for designating the area;

5 a verification information generator that performs processing for generating verification information from the designation information;

a processing command transmitter that transmits the designation information, while transmitting together the verification information and a processing command for  
10 read or write;

a data transmitter that transmits data to the memory device when the processing command is of write;

a data receiver that receives data from the memory device when the processing command is of read; and

15 a data storage that stores the data to transmit to the memory device, while storing the data received from the memory device.

14. The information apparatus according to claim 13, wherein the verification information generator performs  
20 the processing for generating the verification information using the designation information and a verification key.

15. The information apparatus according to claim 14, further comprising:

25 a verification key sharing section that shares the verification key with the memory device.

16. The information apparatus according to claim 13,

further comprising:

an enabled area information sharing section that shares enabled area information indicative of an access enabled area of the memory device with the memory device.

5 17. An access method for an apparatus to gain access to a memory device, comprising:

in the apparatus,

transmitting designation information for designating an access area of the memory device; and

10 transmitting together a processing command for the access area and verification data obtained by encrypting verification information on the designation information using a verification key, and

in the memory device,

15 receiving the designation information;

further receiving the processing command and the verification data, and verifying the designation information using the verification data and the verification key; and

20 executing the processing command when verification succeeds.

18. An access method for an apparatus to gain access to a memory device, comprising:

in the apparatus,

25 sharing enabled area information on an access enabled area of the memory device using a first processing series command;

further sharing a verification key corresponding to the access enabled area using the first processing series command;

transmitting designation information for  
5 designating an access area of the memory device using a second processing series command; and

transmitting together, using the second processing series command, a processing command for the access area and verification data obtained by encrypting verification  
10 information on the designation information using the verification key, and

in the memory device,

receiving the designation information;

further receiving the processing command and the  
15 verification data, and verifying the designation information using the verification data and the verification key; and

executing the processing command when verification succeeds.

20 19. An access method for an apparatus to gain access to a memory device, wherein the memory device has:

a first area with tamper resistance restricting access from the apparatus;

a second area with a large capacity and non-tamper  
25 resistance restricting access from the apparatus;

a third area with a large capacity enabling access from the apparatus; and

a function of distinguishing between first protocol commands that are processing commands at least for the first area and second protocol commands that are processing commands at least for the third area, and the  
5 method comprises:

in the apparatus,

sharing with the memory device enabled area information on an access enabled area of the memory device using the first protocol commands;

10 further sharing a verification key corresponding to the access enabled area using the first protocol commands;

transmitting designation information for designating an access area of the second area using the  
15 second protocol command;

transmitting together, using the second protocols command, a processing command for the access area and verification data obtained by encrypting verification information on the designation information using the  
20 verification key, and

in the memory device,

receiving the designation information;

further receiving the processing command and the verification data, and verifying the designation  
25 information using the verification data and the verification key; and

executing the processing command when verification

succeeds.